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Washington, DC

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15. SUPPLEMENTARY NOTES

16. ABSTRACT

The Program Guide provides the public with information on the Office of Research and Development's current extramural research program. It describes each of the major budget units, the funds associated with each, and the responsible laboratory (ies). In addition, the Guide contains an organizational directory of each laboratory/office, as well as a list of who to contact in each of EPA's regional offices.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Guides (instructions), Organizational charts, Grants, Financial management, Research management. Budgeting Contract Administration, Planning	Research programs, Health and ecological-effects, Energy program, Industrial processes, Public sector, Monitoring and technical support	5A

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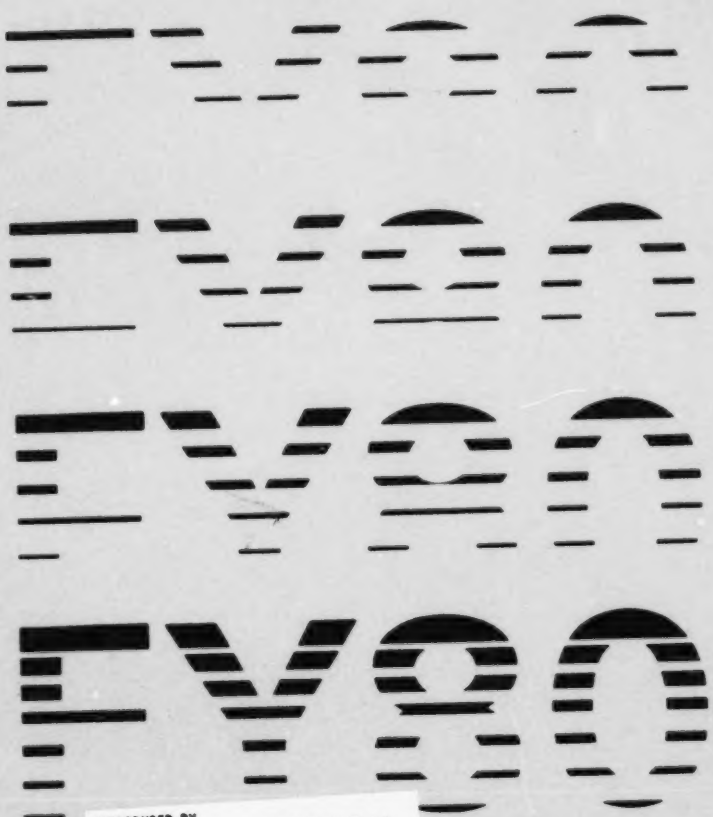
ORD Program Guide



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ATTENTION!
NOTICE OF NEW PROCEDURES

New management procedures have been established for grants and cooperative agreement assistance. Persons interested in applying for funds under either of these categories should read pages 81-84.

Further Information. **Additional information concerning these proposed changes may be obtained by contacting Dr. Richard E. Marland (202-755-2532).**

EPA-600/9-79-038
October 1979

ORD
Program Guide
FY 1980

October 1, 1979—September 30, 1980

Office of Research Program Management
Office of Research and Development
U.S. Environmental Protection Agency
Washington, DC 20460

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Introduction

ORD Program Guide—FY 80

The purpose of the Program Guide is to acquaint the research and development community with the organizational structure of the Office of Research and Development—and to make public ORD's extramural research program for FY 80.

EPA's Office of Research and Development

The U.S. Environmental Protection Agency (EPA) was established in December of 1970 to protect and enchance the nation's environment. The Agency was created by a Presidential Reorganization Order that combined 15 previously existing units of the federal government. This single organizational unit was established to better control environmental pollution, drinking water quality, environmental radiation and noise, solid waste, pesticides, and other toxic substances.

The Office of Research and Development (ORD) is the principal scientific component of EPA. Its fundamental role is to produce the scientific data and technical tools needed to develop a national policy for the effective control of pollution and to promulgate adequate and viable environmental standards. ORD's research is supplemented by general scientific and technical research in other federal agencies, the academic community, and elsewhere. ORD also supports the Agency's involvement in many international organizations that share environmental research and development concerns.

More specific functions of ORD include: (1) maintaining in-house expertise capable of quickly responding to emergencies and giving expert advice and testimony when necessary; (2) sharing the results of environmental research and development with a wide range of individuals, groups, and agencies in ways that are meaningful and practical; and (3) giving expert scientific and technical assistance to other EPA offices to help them formulate environmental policy.

Authority for EPA's research and development programs is included in the annual appropriation acts and through the following legislation.

- Clean Air Act, as amended in 1977 (P.L. 95-95)
- Federal Water Pollution Control Act (P.L. 95-217) as amended by the Clean Water Act of 1977 (P.L. 95-217)
- Safe Drinking Water Act (P.L. 93-523), as amended in November 1977
- Federal Insecticide, Fungicide and Rodenticide Act, as amended (P.L. 92-516)
- Public Health Service Act, as amended (P.L. 78-410)
- Noise Control Act (P.L. 92-574)
- Toxic Substances Control Act (P.L. 94-469)
- National Environmental Policy Act (P.L. 91-190), as amended in August 1975
- Marine Protection, Research and Sanctuaries Act

(P.L. 92-532), as amended in March 1974 (P.L. 93-254)
Resource Conservation and Recovery Act (P.L. 94-580), as amended by the Quiet Communities Act of 1978
Environmental Research, Development and Demonstration Authorization Act (P.L. 94-475)

ORD's Extramural Program

The Office of Research and Development (ORD) establishes its objectives and priorities in response to the overall mission and priorities of EPA and is highly concerned with solving specific priority problems rather than only advancing scientific knowledge. Although the scope of ORD projects may vary from fundamental research to the full-scale engineering demonstration of new pollution control processes, all projects are directed at meeting specified objectives as determined by the Agency's Zero Base Budgeting Process (ZBB). These objectives are described in each of the "decision units," a planning category within the ZBB Process. Each decision unit has a pre-defined goal which fits into the framework of the Agency's overall mission. A description of each decision unit and the funds available for extramural assistance begins on page 5. These are listed alphabetically within each media (i.e., Air, Drinking Water, etc.).

Although much of ORD's external research is solicited by the office, individuals and organizations may submit unsolicited proposals. In order to ensure a more comprehensive review of all unsolicited proposals as well as applications for grant and cooperative agreements, effective October 1, 1979, ORD is changing its procedures for proposal solicitation, review, management, and award process. See page 79 for a detailed explanation of these new procedures.

USER'S GUIDE

MEDIA CATEGORY WATER QUALITY

DECISION UNIT TITLE MARINE ECOLOGICAL EFFECTS

DECISION UNIT DESCRIPTION The objective of this research is to provide information on the ecological effects of specific pollutants and pollutant combinations on marine aquatic ecosystems. Significant activities include the development of a scientific base to support the development of marine and estuarine water quality standards and criteria; determination of the production, function and importance of estuarine wetlands; and determination of the ecological effects of waste treatment effluents and marine waste disposal practices.

MEDIA CATEGORY—The Decision Unit descriptions are grouped according to the media of concern. There are nine separate media categories: Air, Drinking Water, Energy, Interdisciplinary, Pesticides, Radiation, Solid Waste, Toxic Substances, and Water Quality.

OFFICE/LABORATORY ABBREVIATIONS

Code	Office/Laboratory
ERL/Cor	Environmental Research Laboratory Corvallis, Or 97330 200 SW 35th Street Corvallis, OR 97330 CML (503) 757-4601 FTS 420-4601

ASSIGNMENT/CONTACT—Each Decision Unit description includes an abbreviated designation of the office or laboratory responsible for that unit. These abbreviations are easily identified in the Office/Laboratory List found on page 69.

OFFICE/ LABORATORY:	ERL Cor	ERL Narr	OHEE HQ
CONTACT:*	James McCarty	Eric Schneider	David Flemer
EXTRAMURAL FUNDS:**	$614,000	$335,000	$10,000

TO OBTAIN COPIES

Copies of this Program Guide are availble from the EPA's ten regional offices, from ORD's fifteen associated laboratories throughout the country, and from the Office of Research and Development, Headquarters, Washington, D.C. Mail requests should be sent to:

Technical Information Office
Office of Research and Development (RD-674)
U.S. Environmental Protection Agency
Washington, D.C. 20460

You must complete and return the form located at the back of this publication to receive future editions of this Program Guide.

Air

Characterization and Measurement Methods Development

The two principal objectives of this decision unit are the development of new and/or improved sampling methodology and instrumentation which will be used in stationary source, mobile source, and ambient air quality research, and the characterization of emissions from mobile and stationary sources. Special studies at MERL Cincinnati, and ESRL, RTP will establish the magnitude of the atmospheric hazard from the manufacture, use and disposal of carbon fiber products and will evaluate control options. The work performed under this decision unit supports the development and maintenance of new source performance standards, National Emission Standards for Hazardous Pollutants and emission standards for mobile source established under Title II of the Clean Air Act.

OFFICE/ LABORATORY:	ESRL/RTP	MERL/Cin
CONTACT:*	Alfred H. Ellison	Francis T. Mayo
EXTRAMURAL FUNDS:**	$3,680,000	$580,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Air

Ecological Processes and Effects

The function of this decision unit is the analysis of the impact of air pollutants on terrestrial ecosystems. This includes the effects and fate of pollutants on the biotic and abiotic components, the related interactions on biological and physical processes, and the potential impact on human health and welfare. Research findings of the program will relate air pollutant concentrations to actual and potential damage in the environment. The unit conducts studies of: (1) pollutant sources and emissions; (2) the potential for air quality deterioration; and (3) other discharges which alter environmental conditions and affect terrestrial systems.

OFFICE/ LABORATORY:	ERL/Cor
CONTACT:*	Thomas A. Murphy
EXTRAMURAL FUNDS:**	$1,567,700

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Air

Health Effects/ Criteria Pollutants

The objective of this research is to conduct studies on those air pollutants for which Ambient Air Quality Standards have been set. Every five years EPA must present an updated health data base to support maintenance or revision of the Standards. The major goal of this program is to improve substantially the existing health effects data base on those pollutants for which these Standards have been set. This research will include studies of both acute and chronic animal toxicology, controlled human exposure, and epidemiology. The program will place emphasis upon designing and performing studies which permit EPA to assess the health effects resulting from exposure to ambient levels of these pollutants.

OFFICE/ LABORATORY:	HERL/RTP
CONTACT:*	F. Gordon Hueter
EXTRAMURAL FUNDS:**	$4,476,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Air

Health Effects/ Non-Criteria Pollutants

The objective of this program is to develop a health effects data base for use in setting new ambient air quality standards for inhalable particles, including sulfate and nitrate chemical species, and emission standards for hazardous air pollutants. Rapid screening tests are being developed which will serve to provide a better means of identifying possible pollutant health threats for future studies. Studies of the effects of pollutant combinations on normal and stressed animal and human subjects as well as impaired animals will enable the Agency to assess standards from a real world view and develop more realistic margins of safety. Population studies will allow EPA to assess health effects resulting from actual exposures to these pollutants.

OFFICE/ LABORATORY:	OHR/HQ	HERL/RTP
CONTACT:*	George R. Simon	F. Gordon Hueter
EXTRAMURAL FUNDS:**	$1,090,000	$8,594,000
OFFICE/ LABORATORY:	EMSL/RTP	
CONTACT:*	Thomas R. Hauser	
EXTRAMURAL FUNDS:**	$420,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Air

Health Effects/ Transportation Sources

The major objective of this research is to provide the regulatory program office the health effects data on air pollutants emitted from mobile sources. These data are used by the office to determine whether any regulatory action is required to protect the public from these emissions. In the near future, the principal activity of the program is to obtain a health effects data base on diesel exhaust products. The program office will use this data base to tell industry whether large numbers of diesel-powered vehicles will be permitted on the American road.

OFFICE/ LABORATORY:	EMSL/RTP	OHR/HQ
CONTACT:*	Franz J. Burmann	George R. Simon
EXTRAMURAL FUNDS:**	$475,000	$12,000
OFFICE/ LABORATORY:	ESRL/RTP	HERL/RTP
CONTACT:*	Ronald L. Bradow	James R. Smith
EXTRAMURAL FUNDS:**	$708,000	$2,381,00
OFFICE/ LABORATORY:	HERL/Cin	
CONTACT:*	Norman A. Clarke	
EXTRAMURAL FUNDS:**	$925,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Air

Industrial Processes

This program is principally an extramural effort initiated in response to legislative mandates of the Clean Air Act. The objective is to develop and demonstrate pollution control technologies capable of reducing or eliminating potentially hazardous and toxic pollutant emissions from industrial point sources. Program efforts provide technical and cost data which supports regulatory standards development and provides industry with options for environmental control.

OFFICE/ LABORATORY:	OEET/HQ	IERL/Cin
CONTACT:*	David Graham	Eugene E. Berkau
EXTRAMURAL FUNDS:**	$162,400	$1,051,700

OFFICE/ LABORATORY:	IERL/RTP
CONTACT:*	Alfred B. Craig
EXTRAMURAL FUNDS:**	$1,730,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Air

Monitoring Methods and Systems

The goal of this program is the improvement of methods needed in obtaining reliable data for air quality monitoring as set forth in the Clean Air Act Amendments of 1970 and 1977. Included in this program is research in the area of collection, storage, and interpretation of chemical-related data in connection with air surveillance activities, as well as evaluation and improvement of measurement techniques and methods for monitoring air pollutants.

OFFICE/ LABORATORY:	OMTS/HQ	EMSL/RTP
CONTACT:*	James E. Whitney	Thomas R. Hauser
EXTRAMURAL FUNDS:**	$1,000,000	$1,875,000
OFFICE/ LABORATORY:	EMSL/LV	
CONTACT:*	George B. Morgan	
EXTRAMURAL FUNDS:**	$120,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Air

Quality Assurance

The objective of this program is to ensure that the environmental data EPA uses are sufficiently accurate, precise, and reliable to meet Agency needs at a reasonable cost. Those products and services which are necessary for making measurements under conditions which document the validity of the data generated are developed and delivered to the customer. This program's efforts meet Agency requirements for scientifically valid data of known quality to support and enforce regulations and standards pursuant to the Clean Air Act Amendments of 1970 and 1977.

OFFICE/ LABORATORY:	EMSL/RTP
CONTACT:*	Thomas R. Hauser
EXTRAMURAL FUNDS:**	$2,513,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Air

Technical Support

The objectives of the Air Technical Support Program are to assist the Program Offices and the Regions to obtain current and timely data needed for the implementation of Agency decisions and Congressional mandates in support of the Clean Air Act. In this program, a major emphasis is upon sampling and analysis to collect data needed in support of developing regional, state or national air strategies; supporting the assessment of the effectiveness of existing regulations; developing data for future regulatory actions or for validation of models; collecting, analyzing and interpreting data needed for enforcement actions, or providing expertise not readily available in other parts of the Agency. In addition, routine analyses are carried out as part of the planned program in areas such as developing trend data useful in future analyses, such as long term ozone levels, long term particulate levels and routine analyses for components in fuels and fuel additives. The Program is always available for emergency response to unforeseen disasters.

OFFICE/ LABORATORY:	OMTS/HQ	EMSL/RTP
CONTACT:*	James M. Shackelford	Thomas R. Hauser
EXTRAMURAL FUNDS:**	$44,800	$960,000

OFFICE/ LABORATORY:	EMSL/LV
CONTACT:*	David N. McNelis
EXTRAMURAL FUNDS:**	$230,100

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Air

Transport and Fate

The objective of this decision unit is to provide information on the transport and fate of gaseous and particulate air pollutants through the following activities: (1) the determination of the mechanisms and rate constants of formation and removal processes of pollutants in the ambient air; (2) the determination of the level of contribution of various sources to ambient pollutant levels; (3) the development of air quality simulation models that can be used in the prediction of pollutant concentration from various sources; (4) the determination of the atmospheric effects of pollutants on reduced visibility; and (5) the provision of meteorological support to other EPA programs.

OFFICE/ LABORATORY:	ESRL/RTP
CONTACT:*	Alfred H. Ellison
EXTRAMURAL FUNDS:**	$10,351,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Drinking Water

Drinking Water Treatment and Groundwater Protection

This decision unit involves three major areas of research: (1) treatment technology and systems management; (2) identification and measurement; and (3) groundwater protection. The objective of the treatment area is to provide new or improved technology for the effective and economical control of drinking water contaminants. This is done via bench, pilot, and field-scale evaluations of technologies for their cost and effectiveness in limiting contaminants so that the municipal sector will be able to economically achieve compliance with present and future primary drinking water standards. The objective of the identification and measurement area is to develop techniques for sampling, identifying, and measuring the low levels of chemical contaminants found in finished drinking water. The objective of the groundwater area is to provide the scientific basis for developing source control criteria to protect groundwater quality. This involves problem identification and methods-development for evaluating groundwater quality and the movement of pollutants in the underground environment.

OFFICE/ LABORATORY:	MERL/Cin	RSKERL/Ada
CONTACT:*	Gordon G. Robeck	Jack W. Keeley
EXTRAMURAL FUNDS:**	$4,801,000	$1,115,000
OFFICE/ LABORATORY:	EMSL/Cin	ERL/Athens
CONTACT:*	Dwight G. Ballinger	William T. Donaldson
EXTRAMURAL FUNDS:**	$200,000	$633,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Drinking Water

Health Effects

The research of this decision unit provides the health effects data base necessary for enforcement of the Safe Drinking Water Act. The Act protects the public health by requiring the establishment of "Maximum Contaminant Levels" for drinking water and by encouraging the investigation of methods for the safe reuse of wastewater. The health effects data base allows issuance of these Maximum Contaminant Levels for organic, inorganic, and microbiological contaminants of drinking water, as well as providing the data bases necessary for evaluating the feasibility of issuing criteria for the safe reuse of wastewater for potable purposes.

OFFICE/ LABORATORY:	OHR/HQ	HERL/Cin
CONTACT:*	Jack P. Keeve	Leland J. McCabe
EXTRAMURAL FUNDS:**	$43,400	$9,057,100

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Drinking Water

Quality Assurance

The objective of this decision unit is to provide a national quality assurance program to support the Safe Drinking Water Act and the National Primary Drinking Water Regulations. The program includes precise, accurate, and reliable measurement systems for official use, quality control guidelines and procedures to document data quality and systems performance, as well as criteria and procedures for on-site evaluation and certification of laboratories.

OFFICE/ LABORATORY:	EMSL/Cin
CONTACT:*	Dwight G. Ballinger
EXTRAMURAL FUNDS:**	$433,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Effects of Energy-Related Pollutants

The objective of this program is to assess the environmental impact of increased energy development on aquatic and terrestrial ecosystems. In support of this goal, the program: (1) determines the effects of the extraction and use of fuels on freshwater, marine/estuarine, and terrestrial ecosystems; and (2) accumulates needed baseline information useful in forecasting environmental impacts related to the processing, transportation, and conversion of fuels.

OFFICE/ LABORATORY:	OEET/HQ	ERL/Gulf Breeze
CONTACT:*	Alfred A. Galli	Tudor T. Davies
EXTRAMURAL FUNDS:**	$10,429,000	$1,400,000
OFFICE/ LABORATORY:	ERL/Narr	RSKERL/Ada
CONTACT:*	Donald K. Phelps	William C. Galegar
EXTRAMURAL FUNDS:**	$1,062,000	$400,000
OFFICE/ LABORATORY:	ERL/Cor	ERL/Dul
CONTACT:*	Thomas A. Murphy	J. David Yount
EXTRAMURAL FUNDS:**	$935,000	$950,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Environmental Assessment of Conventional and Advanced Energy Systems

This program includes environmental and control capability assessments for several energy technologies, including industrial process energy conservation, energy systems in buildings, solar, geothermal, advanced energy cycles, wastes as fuel systems, and conventional combustion (with emphases on currently unregulated pollutants across the media and on liquid and solid residuals from fossil fuel-fired electricity generating facilities). The program also includes environmental and socioeconomic assessments of alternative energy supply and use patterns on both regional and national levels.

OFFICE/ LABORATORY:	OEET/HQ	IERL/RTP
CONTACT:*	David Berg	Everett L. Plyler
EXTRAMURAL FUNDS:**	$4,077,500	$6,115,000
OFFICE/ LABORATORY:	IERL/Cin	EMSL/LV
CONTACT:*	Clyde J. Dial	Donald B. Gilmore
EXTRAMURAL FUNDS:**	$1,868,500	$160,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Flue Gas Particulate Control

The purpose of this program is to assess and develop practicable technological controls to abate man-made or man-induced emissions of particulates. The program is particularly concerned about those particulates that affect the health and welfare of the population. In seeking this purpose, the unit: (1) assesses and improves the effectiveness of conventional particulate control technology to meet existing and proposed particulate emission regulations; (2) assures that technology is available to permit increased use of low sulfur western coals such that particulate emissions can be controlled within existing and proposed standards; (3) develops and evaluates new control technology for fine and inhalable particulate matter from stationary and fugitive emissions sources; (4) develops a scientific basis and fundamental understanding to support all particulate control research and development activities; and (5) assesses and develops control of particulate emissions from Mobile Diesel Engines to support the Agency mandate to set a best available technology standard by 1981.

OFFICE/ LABORATORY:	OEET/HQ	IERL/RTP
CONTACT:*	George Rey	James H. Abbott
EXTRAMURAL FUNDS:**	~~$561,000~~	$6,255,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Flue Gas Sulfur Oxide Control

The objective of the program is to assure that reliable, economical flue gas desulfurization technology is adequately demonstrated for conventional, fossil fuel-fired boilers. This includes utility and industrial coal combustion, in support of EPA's efforts in setting standards and reviewing innovative technology as directed by the Clean Air Act.

OFFICE/ LABORATORY:	OEET/HQ	IERL/RTP
CONTACT:*	Robert N. Statnick	Michael A. Maxwell
EXTRAMURAL FUNDS:**	$75,000	$1,400,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Fuel Extraction

The goal of this program is to assess, develop, identify and verify control technology for solid fuel, oil and gas extraction which will assure that the recovery of the nation's fuel reserves is conducted in an environmentally acceptable manner. To this end, equipment, methods, and technology are assessed and developed to prevent, control and abate the discharge of environmental pollutants from both point and non-point sources. Pollution sources include facilities for exploration, production, storage, and transportation of coal, uranium, oil shale, oil, and gas. Both normal operations and accidental spills are examined. Methods used by the program for attaining this goal are: (1) multi-media assessments of discharges and emissions; (2) evaluation and documentation of the environmental acceptability and pollution abatement effectiveness of control technology; (3) timely responses to data requirements of EPA program offices; and (4) publication of user manuals to meet agency, industry, and state needs.

OFFICE/ LABORATORY:	OEET/HQ	IERL/Cin
CONTACT:*	M. Wayne Bloch	Ronald D. Hill
EXTRAMURAL FUNDS:**	$103,000	$1,868,500

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Fuel Processing, Preparation and Advanced Combustion

The purpose of this decision unit is to assure that adequate pollution control technology is developed and evaluated and to ensure that effluent and emission standards are recommended for emerging energy technologies, including fluidized-bed combustion, coal gasification and liquefaction, coal cleaning, oil shale processing and biomass conversion. The program seeks this goal through the following activities: (1) development of methods for sampling, analysis, and continuous monitoring of emissions and effluents from emerging energy technologies; (2) characterization of emissions and effluents from existing bench scale, pilot plant, and demonstration facilities; and (3) development at bench scale and evaluation of the cost and performance of pollution control technology associated with emerging energy processes.

OFFICE/ LABORATORY:	OEET/HQ	IERL/Cin
CONTACT:*	Morris Altschuler	Clyde J. Dial
EXTRAMURAL FUNDS:**	$114,000	$2,246,600
OFFICE/ LABORATORY:	IERL/RTP	
CONTACT:*	Robert P. Hangebrauck	
EXTRAMURAL FUNDS:**	$7,720,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Health Effects of Energy-Related Pollutants

The objectives of this interagency program of research are to provide the techniques and data necessary to: (1) determine the qualitative and quantitative effects of energy-related agents (criteria and non-criteria pollutants) on human health; (2) assess the health risks to human population associated with all aspects of energy production and utilization; (3) provide guidance for energy systems related control and abatement programs to the extent that such programs are dependent upon health effects data; and (4) provide reliable information necessary for the establishment of regulations which determine standards of exposure for energy-related agents.

OFFICE/ LABORATORY:	OEET/HQ	HERL/RTP
CONTACT:*	Gerald Rausa	F. Gordon Hueter
EXTRAMURAL FUNDS:**	$14,437,000	$2,450,000
OFFICE/ LABORATORY:	HERL/Cin	
CONTACT:*	R. John Garner	
EXTRAMURAL FUNDS:**	$1,100,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202 755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Energy

Measurement Systems & Instrumentation Development for Energy-Related Pollutants

The objectives of this program are to provide a data base, and measurement and monitoring methodologies and instrumentation. These are needed for emission source identification and characterization and the transport and transformation of energy-related pollutants in the atmosphere, fresh- and seawater, and soil. By monitoring and measuring these pollutants, a quantitative assessment of their sources and impacts can be made which is needed to develop cost-effective control strategies.

OFFICE/ LABORATORY:	OEET/HQ	ESRL/RTP
CONTACT:*	James T. Stemmle	Alfred H. Ellison
EXTRAMURAL FUNDS:**	$3,270,000	$2,800,000
OFFICE/ LABORATORY:	EMSL/LV	EMSL/RTP
CONTACT:*	George B. Morgan	Thomas R. Hauser
EXTRAMURAL FUNDS:**	$1,190,000	$325,000
OFFICE/ LABORATORY:	ERL/Athens	ERL/GB
CONTACT:*	David W. Duttweiler	Tudor T. Davies
EXTRAMURAL FUNDS:**	$250,000	$150,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Energy

Measurement Systems & Instrumentation Development for Energy-Related Pollutants (cont'd)

OFFICE/LABORATORY: IERL/RTP

CONTACT:* John K. Burchard

EXTRAMURAL FUNDS:** $150,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Energy

Nitrogen Oxide Control

The purpose of this program is to assure the development and demonstration of a full range of economical, energy-efficient nitrogen oxide control technology for stationary sources. This could permit the combustion of coal in non-attainment areas as well as provide a basis for New Source Performance Standards for stationary sources. The program seeks this task by: (1) developing and demonstrating a reliable, energy-efficient, low NO_x emitting coal burner; and (2) developing combustion modification technology for a full range of fossil fuel combustion sources.

OFFICE/ LABORATORY:	OEET/HQ	IERL/RTP
CONTACT:*	Robert N. Statnick	Joshua S. Bowen, Jr.
EXTRAMURAL FUNDS:**	$870,400	$11,075,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Energy

Transport and Fate of Energy-Related Pollutants

The major objective of this effort is to elucidate the mechanisms and processes which govern the emission, transport, and transformation of energy-related pollutants. Pollutants from fossil fuel fired power plants and boilers and new energy technology activities, such as coal gasification and liquefaction, in-situ oil shale retorting, and geothermal energy, are investigated by the program. The understanding of emission sources, transport, and transformation processes lead to a regulatory strategy and control devices which mitigate or alleviate effects on human health and welfare.

OFFICE/ LABORATORY:	OEET/HQ	ESRL/RTP
CONTACT:*	Daniel Golomb	Alfred H. Ellison
EXTRAMURAL FUNDS:**	$4,300,000	$2,700,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Interdisciplinary

Anticipatory Research and Development

The objectives of this program are to identify and characterize emerging problems before serious crises occur, develop approaches to long-term problems, and assure that basic studies needed to support applied research activities are conducted. The program is divided into three components with the following purposes: (1) Innovative Research—to provide opportunities for individual scientists with unique ideas; (2) Center Support Research—to provide long-term support for basic studies in key research areas; and (3) Directed Programs—to conduct systematic studies of emerging interdisciplinary problems and to support the methodology development and utilization of exploratory environmental sciences. Emphasis is presently on both the problems of acid rain and environmental cancer, the utilization of long-term biomonitoring, and the development of methodologies for estimating the economic benefits of environmental protection.

OFFICE/ LABORATORY:	OPSA/HQ
CONTACT:*	Dennis A. Tirpak
EXTRAMURAL FUNDS:**	$6,783,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Interdisciplinary

Minority Institutions Research Support (MIRS)

The objectives of this program are: (1) to identify existing and potential environmental research capabilities within minority institutions and assist these institutions in utilizing these capabilities to participate in EPA research activities; (2) to help minority institutions become more competitive with other institutions for research funds; (3) to award research and demonstration grants/cooperative agreements to minority institutions in a manner which will support the research objectives of the Office of Research and Development; and (4) to promote a good working relationship between the Agency and participating institutions.

OFFICE/LABORATORY: OMTS/HQ

CONTACT:* Clyde Bishop

EXTRAMURAL FUNDS:** $742,400

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Interdisciplinary

Scientific Assessment

The objective of this office is to enhance the risk assessment capabilities within the Agency and develop scientific criteria concerning the effects of pollutants on ecological systems and human health. Initial risk assessment activity will stress the development of guidelines and methodologies for Agency-wide use that determine the potential risk from exposure to specific pollutants. A primary objective is to provide a central focal point for quality control of all Agency risk assessment activities. Following guidelines development, a review and oversight activity will be implemented to insure uniformity consistency and comparability of the assessments done by other Agency offices. Risk assessments will be developed for the program offices upon their request. Targeted areas for assessment include exposure, and carcinogenic, reproductive, and other chronic effects. Criteria development on pollutant effects will be conducted in response to program office needs and will take the form of criteria documents, health assessments and special reports.

OFFICE/ LABORATORY:	OHEA/HQ	ECAO/Cin
CONTACT:*	Elizabeth L. Anderson	Jerry F. Stara
EXTRAMURAL FUNDS:**	$280,000	$1,008,000
OFFICE/ LABORATORY:	ECAO/RTP	
CONTACT:*	Lester D. Grant	
EXTRAMURAL FUNDS:**	$1,000,000	

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Pesticides

Ecological Effects

The objective of this program is to determine the cumulative acute and chronic effects of pesticides on ecosystems. The pesticides are studied singly and in combination and on target and non-target organisms in terrestrial and aquatic ecosystems. The unit seeks this goal through the following activities: (1) development of sensitive bioassay measurements and techniques to measure pesticide effects in organisms; (2) development of laboratory, field, greenhouse, and microcosm techniques to assess pesticide-organism responses and subsequent ecological interactions within an aquatic or terrestrial ecosystem; (3) provision of accurate data on ecological and biological effects of specific pesticides involved in rebuttable presumption (RPAR) and non-RPAR compounds for agency regulatory purpose; and (4) determination of pesticide transport and fate within ecosystems and the relating of this information to assessments of hazards to be used for regulatory purposes.

OFFICE/ LABORATORY:	ERL/Cor	ERL/GB
CONTACT:*	Thomas A. Murphy	Thomas W. Duke
EXTRAMURAL FUNDS:**	$213,000	$100,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Pesticides

Health Effects

This decision unit provides research information and technical assistance in support of Agency activities under the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Program objectives include: (1) determination of the health effects of major classes of pesticides now registered by EPA; (2) evaluation of the safety of new and substitute pest control agents, such as biological; (3) development and validation of new toxicological methods to be used in pesticide registration; and (4) development and application of analytical methods for detecting pest control agents which may affect humans.

OFFICE/ LABORATORY:	OHR/HQ	HERL/RTP
CONTACT:*	Frode Ulvedahl	William F. Durham
EXTRAMURAL FUNDS:**	$150,600	$2,182,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Pesticides

Integrated Pest Management

The objective of this program is to develop biologically integrated alternatives to use with chemical pesticides for the control of agricultural and urban pests, primarily insects and weeds. Program activities include: (1) developing integrated pest management systems for cotton, soybeans, alfalfa, apples, and corn ecosystems; (2) develop systems for urban pests, including cockroaches, fire ants, aphids in shade pests, turf pests, termites, mosquitoes, and similar pests; and (3) conduct technology transfer activities for new IPM systems, including control strategies in conjunction with the U.S. Department of Agriculture.

OFFICE/ LABORATORY:	OEPER/HQ
CONTACT:*	Kenneth J. Hood
EXTRAMURAL FUNDS:**	$886,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Pesticides

Quality Assurance

The major goals of lthis program are to: (1) determine the level of quality of analytical measurement data which is needed to allow decisions to be made which cannot be challenged based on the quality of the data; and (2) assure that data used by EPA are produced at this minimal level of quality.

OFFICE/ LABORATORY:	HERL/RTP
CONTACT:*	Randall R. Watts
EXTRAMURAL FUNDS:**	$48,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Radiation

Health and Ecological Effects

Preliminary U.S. data and reported information from Eastern Europe and the Soviet Union indicate that chronic, low-level exposure to microwaves could produce behavioral, teratological effects and could also affect defense mechanisms against immunity. The program's purpose is thus to delineate further and to evaluate health effects information which will be needed to establish guidelines for environmental levels of non-ionizing radiation to which the public is exposed. The research requires a highly technical, interdisciplinary team to determine potential biological effects from exposure to environmentally occurring electromagnetic radiation frequencies and power densities and to identify mechanisms of inter-power densities of those interactions.

OFFICE/ LABORATORY:	HERL/RTP
CONTACT:*	Daniel F. Cahill
EXTRAMURAL FUNDS:**	$1,520,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Solid Waste

Control Technology

The objective of this decision unit is to improve or develop new technologies to achieve environmentally and economically acceptable solid and hazardous waste management. Conservation and recovery of resources are prime considerations in this endeavor. Functions of this program include: (1) development of a methodology and/or equipment to eliminate the effects of solid and hazardous waste released into the environment; (2) development of new or improved management techniques, and new or improved methods of collection, storage, transportation, and disposal; (3) development of new or improved methods for reduction, separation, processing and recovery of resources, including energy; and (4) establishment of a technical basis to support the Agency's efforts to develop guidelines and regulations for solid and hazardous waste management and to implement these guidelines and regulations by state and local governments and the private sector.

OFFICE/ LABORATORY:	MERL/Cin	IERL/Cin
CONTACT:*	Francis T. Mayo	David G. Stephan
EXTRAMURAL FUNDS:**	$4,610,000	$1,650,000
OFFICE/ LABORATORY:	IERL/RTP	OEET/HQ
CONTACT:*	Alfred B. Craig	William A. Rosenkranz
EXTRAMURAL FUNDS:**	$500,000	$244,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Toxic Substances

Characterization and Measurement Methods Development

The objective of this program is to develop improved methods for characterization and quantification of toxic chemicals in the environment. The unit's activities include the improvement of collection devices for toxics in air, the improvement of separation techniques for characterization of toxics in air, development of methods for characterization and separation of toxics in sediments, and development of methods for characterization of nonvolatile organics in water. Work also involves measurement of exposure concentration of selected toxics in air samples and to a limited extent in water and sediments.

OFFICE/ LABORATORY:	OEPER/HQ	ESRL/RTP
CONTACT:*	Rizwanul Haque	Alfred H. Ellison
EXTRAMURAL FUNDS:**	$12,000	$309,000
OFFICE/ LABORATORY:	ERL/Athens	
CONTACT:*	David W. Duttweiler	
EXTRAMURAL FUNDS:**	$139,200	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Toxic Substances

Ecological Effects

The objective of this decision unit is to develop rapid, reliable and economical screening techniques for assessing the effects of toxic substances in the aquatic and terrestrial environments. Research is also conducted to develop the fundamental scientific basis for these techniques to assure their reliability and accuracy. An additional objective is to ultimately predict the levels of human exposure to toxic substances released into the terrestrial and aquatic environment. This work will be undertaken in a series of major field and laboratory-microcosm investigations and may be based in part upon bioassay techniques.

OFFICE/ LABORATORY:	OEPER/HQ	RSKERL/Ada
CONTACT:*	Courtney Riordan	William C. Galegar
EXTRAMURAL FUNDS:**	$300,000	$99,000
OFFICE/ LABORATORY:	ERL/Athens	ERL/GB
CONTACT:*	David W. Duttweiler	Thomas W. Duke
EXTRAMURAL FUNDS:**	$1,010,000	$125,000
OFFICE/ LABORATORY:	ERL/Dul	ERL/Narr
CONTACT:*	J. David Yount	Richard W. Latimer
EXTRAMURAL FUNDS:**	$502,000	$235,000
OFFICE/ LABORATORY:	ERL/Cor	ESRL/RTP
CONTACT:*	Thomas A. Murphy	A. Paul Altshuller
EXTRAMURAL FUNDS:**	$1,327,300	$1,050,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Toxic Substances

Ecological Effects (cont'd)

OFFICE/ LABORATORY:	IERL/RTP	EMSL/RTP
CONTACT:*	John K. Burchard	Franz J. Burmann
EXTRAMURAL FUNDS:**	$800,000	$1,300,000
OFFICE/ LABORATORY:	EMSL/LV	
CONTACT:*	George B. Morgan	
EXTRAMURAL FUNDS:**	$362,000	

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Toxic Substances

Health Effects

The major objective of this decision unit is to develop improved methodologies and techniques to determine the toxic effects of chemical substances in support of the development and implementation of Federal environmental regulations. Emphasis is placed on research to promote and validate improved screening techniques for determining the carcinogenic, mutagenic, teratogenic, neurotoxic and other toxicologic effects of chemical substances. This decision unit also conducts research required by the Clean Air Act to specifically improve reliability of estimates of skin cancer related to stratospheric ozone depletion. Of particular importance to this research program are the initiatives in public health areas of scientific investigation relating to neurotoxicology, total exposure, and toxicity indicators of toxic substances.

OFFICE/ LABORATORY:	OHR/HQ	HERL/Cin
CONTACT:*	W. Wade Talbot	Richard J. Bull
EXTRAMURAL FUNDS:**	$296,700	$3,855,000
OFFICE/ LABORATORY:	HERL/RTP	
CONTACT:*	Ronald F. Baron	
EXTRAMURAL FUNDS:**	$8,534,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Toxic Substances

Industrial Processes

This program was established to support the Office of Toxic Substances in its implementation of the Toxic Substances Control Act. Its objectives include pollutant identification and quantification, as well as evaluation and development of quality controls and alternative chemical processes which are environmentally acceptable. It provides technical assistance by participating in working groups, by reviewing reports and documents, and by developing expert testimony as required by OTS. The program also provides information on the availability of chemicals to substitute those whose consumption was reduced as mandated by the Toxic Substances Control Act.

OFFICE/ LABORATORY:	OEET/HQ	IERL/Cin
CONTACT:*	Carl Schafer	Eugene E. Berkau
EXTRAMURAL FUNDS:**	$409,000	$438,800
OFFICE/ LABORATORY:	IERL/RTP	
CONTACT:*	Alfred B. Craig	
EXTRAMURAL FUNDS:**	$390,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Toxic Substances

Technical Support

The objective of this program is to provide support to Agency operating programs in the area of Toxic Substances. Technical support falls into the following categories:

(1) responding to emergency requirements for field, analytical and data analysis support; (2) providing data requiring ORD specialized field and analytical studies capabilities and organizing that data into summaries and reports; (3) adapting and modifying basic state-of-the-art techniques to gather empirical evidence of specific pollutants or suspected pollutants; (4) performing and reporting the results of complex chemical or physical analyses; and (5) testifying as expert witnesses at administrative and judicial proceedings and consultations.

OFFICE/ LABORATORY:	OMTS/HQ	EMSL/Cin
CONTACT:*	C. Eugene James	Robert L. Booth
EXTRAMURAL FUNDS:**	$196,000	$50,000
OFFICE/ LABORATORY:	EMSL/RTP	EMSL/LV
CONTACT:*	Franz J. Burmann	E. Paul Richitt, Jr.
EXTRAMURAL FUNDS:	$361,500	$411,100

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Toxic Substances

Transport and Fate

One objective of this decision unit is to develop methodologies for transport and fate processes to be used in building and validating exposure assessment models for toxics in multimedia environments. Another objective is the development of improved protocols for transport and fate of toxic chemicals. The program is developing models for prediction of exposure concentration of toxic chemicals to air, water, soil/sediment, food chain, multimedia and humans.

OFFICE/ LABORATORY:	OEPER/HQ	ESRL/RTP
CONTACT:*	Rizwanul Haque	Alfred H. Ellison
EXTRAMURAL FUNDS:**	$175,000	$370,000
OFFICE/ LABORATORY:	ERL/Athens	RSKERL/Ada
CONTACT:*	David W. Duttweiler	William C. Galegar
EXTRAMURAL FUNDS:**	$1,059,500	$70,000
OFFICE/ LABORATORY:	ERL/Narr	
CONTACT:	Donald K. Phelps	
EXTRAMURAL FUNDS:	$20,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Water Quality

Characterization and Measurement Methods Development

The objective of this program is to provide sample collection and analysis methods for the identification and measurement of chemical constitutents in water, sludge, sediment, leachate, and soil. These methods must be consistent with requirements for sensitivity demanded by users who are in the research and the operations' communities. The methods are to be applicable to organic compounds, chemical elements, different inorganic species of the same elements, and to classes of substances, without necessarily identifying or measuring specific constituents. The methods are also to be applicable to constituents in suspended particulates as well as solution.

OFFICE/ LABORATORY:	ERL/Athens
CONTACT:*	Charles H. Anderson
EXTRAMURAL FUNDS:**	$357,500

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202 755-2532.

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Water Quality

Chesapeake Bay Program

This decision unit is concerned with determining what stresses on the Bay ecosystem may be anticipated in both the near and distant future, identifying existing programs that address the needs of the Bay users, and developing and implementing (where needs remain unmet) the programs necessary to meet these prioritized needs. Recognizing that a significant amount of information relating to major environmental problems does exist, but that there are specific aspects of environmental stress which EPA and other federal, state and local governments, scientists, and the Bay community agree should be investigated immediately, the Program will conduct research and abatement programs for a select number of priority environmental problem areas. Studies are conducted in the following areas: (1) research on rooted aquatics, toxics, and eutrophication in the Bay; (2) definition of the Bay user categories; and (3) classification of the needs of the Bay users.

OFFICE/ LABORATORY:	ERL/GB
CONTACT:*	Tudor T. Davies
EXTRAMURAL FUNDS:**	$2,090,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Water Quality

Freshwater Ecological Effects

The goal of this program is to provide a legally defensible data base for EPA use in the establishment of water quality criteria and standards, effluent and waste disposal guidelines. Research studies in the program element include the following areas: (1) development of water quality scientific data, rational and better methods for supporting and establishing water quality criteria and regulations, and the development of screening tests and test protocols for aquatic biological effects as surrogates for the effects on humans; (2) determination of the ecological effects of polluted dredge spoils on marshes and the adjacent aquatic systems and in freshwater areas; (3) study of the in stream ecological effects of nonpoint source pollution; (4) determination and comparison of the effectiveness of various lake restoration techniques on a limnological and economic basis; (5) assessment of the ecological impact of the bioaccumulation of trace metal and refractory organic toxicants in the aquatic food chain; and (6) provision of methods for measuring the toxicity of complex effluents.

OFFICE/ LABORATORY:	OEPER/HQ	ERL/Cor
CONTACT:*	Melvin Nolan	Thomas A. Murphy
EXTRAMURAL FUNDS:**	$12,000	$989,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

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Water Quality

Great Lakes Research and Development

The objective of this program is to provide a scientific basis for assessing the source, fate, effects, and importance of pollutants in the Great Lakes. An integral part of the program is to develop and improve predictive models of pollutants to aid management strategies and to protect and enhance water quality. This research supports the revised U.S.—Canadian International Agreement of 1978 to study the Great Lakes system and manage it to prevent deterioration of these water resources. The objectives of the research program are to characterize pollution problems of the Great Lakes, determine the dynamic processes affecting pollution of large lakes, and develop predictive methods for describing the fate and effects of pollutants in the Great Lakes. Emphasis will be on the verification of phosphorous-phytoplankton models that have been used in load reduction simulations. New research will be on the fate of hazardous substances in the Great Lakes.

OFFICE/ LABORATORY:	OEPER/HQ	ERL/Dul
CONTACT:*	William Sayers	J. David Yount
EXTRAMURAL FUNDS:**	$28,000	$864,500

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Water Quality

Health Effects

The objective of this decision unit is the protection of the public health through support of Agency efforts under the Clean Water Act to ensure the safe treatment, disposal, and potential reuse of municipal wastewater and sludge. The health effects data base: (1) determines health implications of existing and innovative technology for the treatment and disposal of wastewater and sludge; (2) develops rapid screening tests for characterizing toxic pollutants in complex effluents; (3) develops marine and freshwater recreational water quality critera; and (4) develops criteria for the safe reuse of wastewaters for potable, industrial, and aquacultural purposes.

OFFICE/ LABORATORY:	OHR/HQ	HERL/Cin
CONTACT:*	Kathleen W. Conway	Herbert L. Pahren
EXTRAMURAL FUNDS:**	$139,000	$4,980,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Water Quality

Industrial Processes

The purpose of this decision unit is to develop and demonstrate pollution control technologies capable of reducing pollutant discharge from industrial point sources. This effort is in response to mandates of the Clean Water Act and the Consent Decree of 1976. Research provides technical and cost data bases supporting regulatory standards. The program consists of two main pursuits: the assessment of the magnitude of industrial pollution problems, including the economic, environmental, and energy use efficiency of existing technologies and the potential for development of new technologies; and the research, development and demonstration of promising pollution control technologies. Industry point sources include chemical processing, textile, pulp, paper, food, metal fabrication and finishing, hazardous material spills, metal and mineral production, and petroleum refining and storage. High priority is put on the development and demonstration of reuse and recycle options for industrial wastewater discharges. In addition, this program addresses technology for prevention and control of accidental spills of hazardous materials.

OFFICE/ LABORATORY:	RSKERL/Ada	IERL/Cin
CONTACT:*	Leon H. Myers	Eugene E. Berkau
EXTRAMURAL FUNDS:**	$933,400	$5,582,000
OFFICE/ LABORATORY:	IERL/RTP	OEET/HQ
CONTACT:*	Alfred B. Craig	Carl J. Schafer
EXTRAMURAL FUNDS:**	$2,875,000	$581,400

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Water Quality

Marine Ecological Effects

This program is concerned with providing the legally defensible data base for use in the establishment/revision of water quality criteria, ocean disposal criteria and standards, effluent standards and waste disposal guidelines for marine/estuarine environments. The objectives of this research are: (1) to understand the structure and function of natural ecosystems; (2) to understand effects of pollutants, singly and in complex mixtures, on individuals, populations, and communities as the basis for predicting effects on entire ecosystems; (3) to develop necessary methods for detecting and quantifying pollutants and determing their persistence; and (4) to measure ecological effects of these pollutants; and (5) to determine the significance or changes in ecosystems.

OFFICE/ LABORATORY:	OEPER/HQ	ERL/Cor
CONTACT:*	Sam E. Williams	Thomas A. Murphy
EXTRAMURAL FUNDS:**	$59,000	$629,700
OFFICE/ LABORATORY:	ERL/Narr	ERL/GB
CONTACT:*	Richard W. Latimer	Thomas W. Duke
EXTRAMURAL FUNDS:**	$228,400	$100,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Water Quality

Monitoring Methods and Systems

This program is involved with the adaptation of currently available or proposed methods and measurement systems to monitor water quality. Analytical methods and measurement systems often are ill-suited for application to field environmental monitoring because they are developed by manufacturers or research institutions. Considerable work is needed to evaluate, modify, and adapt instruments or methods for application in the field. An important function of the unit is the establishment of guidelines for the systematic monitoring of water quality. This activity should improve monitoring of water quality and assure that the monitoring data so obtained are reliable.

OFFICE/ LABORATORY:	OMTS/HQ	EMSL/Cin
CONTACT:*	S. Sidney Verner	Dwight G. Ballinger
EXTRAMURAL FUNDS:**	$1,000,000	$370,000
OFFICE/ LABORATORY:	EMSL/LV	
CONTACT:*	George B. Morgan	
EXTRAMURAL FUNDS:**	$72,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Water Quality

Quality Assurance

The goal of this program is to ensure that analytical measurement data produced for the Agency are of no less than the minimal acceptable level of quality. This level should guarantee that decision makers cannot be challenged because of the precision and accuracy of the data. Other objectives are to provide systems of measurement capable of creating data at this minimal level of quality and to ensure that these systems continue to perform at this level.

OFFICE/ LABORATORY:	EMSL/Cin
CONTACT:*	Dwight G. Ballinger
EXTRAMURAL FUNDS:**	$3,971,500

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Water Quality

Renewable Resources (Industrial)

The objective of this program is to develop and verify methodologies to select and implement cost-effective management practices to control agricultural and forestry nonpoint sources of water pollution. Program activities include: (1) development of watershed nonpoint source problem assessment techniques for analysis of the relationships between nonpoint source pollutant loadings and water quality; (2) establishment of nonpoint source "wet weather" water quality criteria; (3) evaluation of new or improved cost-effective "best management practices;" and (4) development of strategies for the installation and maintenance of cost-effective "best management practices" systems.

OFFICE/ LABORATORY:	OEPER/HQ	ERL/Athens
CONTACT:*	Darwin R. Wright	George W. Bailey
EXTRAMURAL FUNDS:**	$17,000	$923,500
OFFICE/ LABORATORY:	RSKERL/Ada	
CONTACT:*	James P. Law	
EXTRAMURAL FUNDS:**	$924,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Water Quality

Technical Support

The objective of this decision unit is to provide ORD support to Program and Regional Offices. This support utilizes expertise and/or equipment that only ORD has. The technical support generally falls into the following categories: (1) scientific consultation which utilizes ORD's existing scientific expertise; (2) collection, analysis, and interpretation of environmental data which require the use of ORD's sophisticated equipment and instruments, and/or the expertise of ORD's technicians and scientists; and (3) emergency response in the event of oil or hazardous materials spills.

OFFICE/ LABORATORY:	EMSL/LV
CONTACT:*	George B. Morgan
EXTRAMURAL FUNDS:**	$389,100

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202 755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Water Quality

Transport and Fate

The objective of this program is to provide the scientific understanding, methodologies, and associated data bases required to: (1) evaluate and predict the transport, transformations and fate of trace organic and inorganic pollutants entering fresh water ecosystems; (2) predict the impact on water quality from the discharge of point and nonpoint source pollution into fresh surface waters; and (3) evaluate the relative cost-effectiveness of alternative basinwide point and nonpoint source pollution control strategies. This technology will be used in the development of water quality criteria for toxic pollutants, evaluation of pesticides under consideration for registration, identification of the necessary point and nonpoint source control requirements under water quality management planning efforts, and determination of appropriate effluent limitations to be imposed through the permit program in those stream areas limited by water quality standards.

OFFICE/ LABORATORY:	OEPER/HQ	ERL/Athens
CONTACT:*	Harry C. Torno	Robert R. Swank, Jr.
EXTRAMURAL FUNDS:**	$50,800	$791,500

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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Water Quality

Urban Systems, Toxics and Residuals Management

The objective of this decision unit is to provide the research support required by the Agency in the control of waterborne toxics and wastewater residuals in urban environments. Research projects include: (1) the development of strategies to prevent the discharge of toxic substances and the containment of them if discharge does occur; (2) the production of technology and the development of management schemes to dispose of, or use, municipal sludge; (3) the analysis and improvement of urban treatment system operations in terms of capital costs and maintenance costs, efficiency, reliability, energy sensitivity, and environmental improvement.

OFFICE/ LABORATORY:	OEET/HQ	MERL/Cin
CONTACT:*	James V. Basilico	John J. Convery
EXTRAMURAL FUNDS:**	$98,400	$7,551,000

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

**These funds represent the total available for grants, contracts, and cooperative agreements.

Water Quality

Wastewater Systems Control Technology

The goals of this decision unit are the development of cost-effective technologies, assessment methodologies, a cost/performance/reliability data base, preventive and restoration techniques, and management/user assistance tools in support of the Clean Water Act Amendments. The objectives of the program include: (1) improvement of existing treatment processes in publicly owned treatment works; (2) the development of new technology alternatives for high water quality requirements or energy reduction in wastewater treatment with emphasis on facilities used by small communities; (3) the development of technologies and management methods for assessing, preventing, controlling and treating pollution caused by wet weather combined sewer overflows and urban runoff; (4) improvement of designs of land treatment systems; (5) development and upgrading the collection and treatment methods for individual and rural wastewater systems; and (6) the development of methods and technologies for water conservation and reuse.

OFFICE/ LABORATORY:	RSKERL/Ada	OEET/HQ
CONTACT:*	Curtis C. Harlin	Francis J. Condon
EXTRAMURAL FUNDS:**	$1,220,000	$160,000
OFFICE/ LABORATORY:	MERL/Cin	
CONTACT:*	John J. Convery	
EXTRAMURAL FUNDS:**	$5,927,000	

*For assistance and information on cooperative agreements and contracts, contact the individual named above.

For assistance and information regarding grants, contact the Office of Research and Development, (RD-675), Washington, D.C. 20460, or call 202/755-2532.

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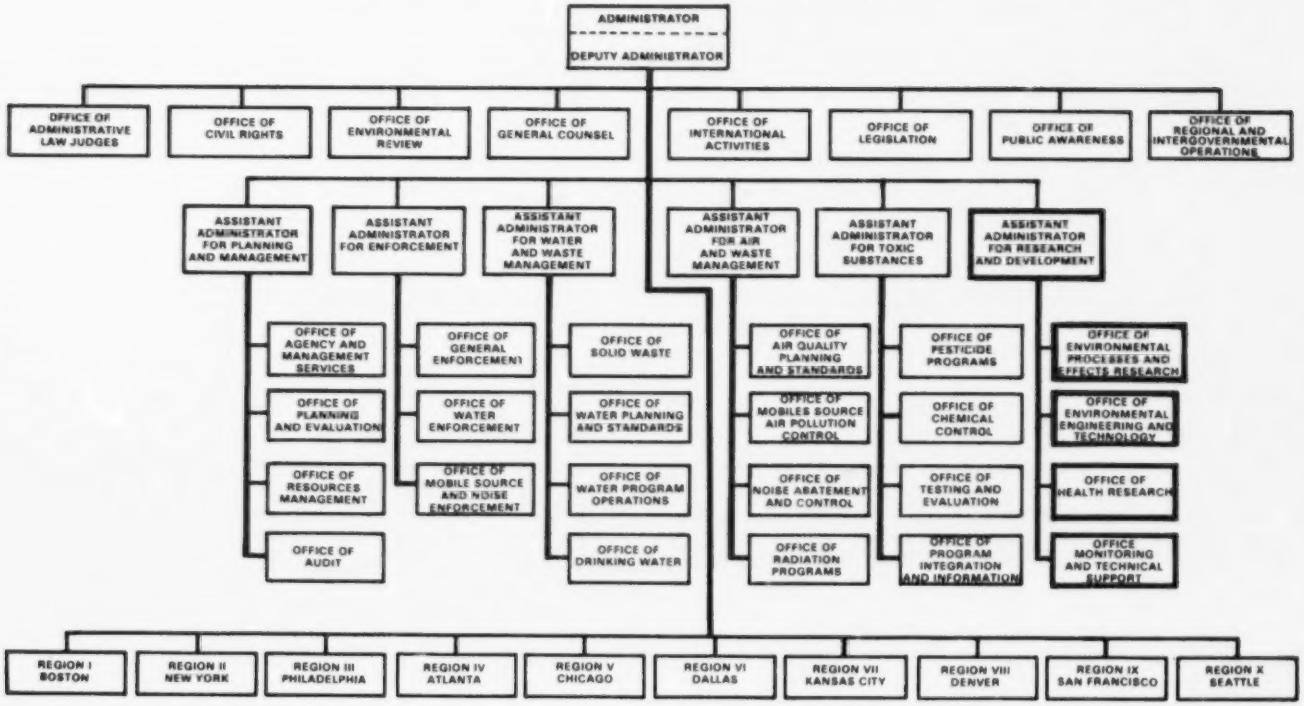
ORGANIZATION OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY


ADMINISTRATOR
DEPUTY ADMINISTRATOR
OFFICE OF ADMINISTRATIVE LAW JUDGES
OFFICE OF CIVIL RIGHTS
OFFICE OF ENVIRONMENTAL REVIEW
OFFICE OF GENERAL COUNSEL
OFFICE OF INTERNATIONAL ACTIVITIES
OFFICE OF LEGISLATION
OFFICE OF PUBLIC AWARENESS
OFFICE OF REGIONAL AND INTERGOVERNMENTAL OPERATIONS
ASSISTANT ADMINISTRATOR FOR PLANNING AND MANAGEMENT
ASSISTANT ADMINISTRATOR FOR ENFORCEMENT
ASSISTANT ADMINISTRATOR FOR WATER AND WASTE MANAGEMENT
ASSISTANT ADMINISTRATOR FOR AIR AND WASTE MANAGEMENT
ASSISTANT ADMINISTRATOR FOR TOXIC SUBSTANCES
ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT
OFFICE OF AGENCY AND MANAGEMENT SERVICES
OFFICE OF PLANNING AND EVALUATION
OFFICE OF RESOURCES MANAGEMENT
OFFICE OF AUDIT
OFFICE OF GENERAL ENFORCEMENT
OFFICE OF WATER ENFORCEMENT
OFFICE OF MOBILE SOURCE AND NOISE ENFORCEMENT
OFFICE OF SOLID WASTE
OFFICE OF WATER PLANNING AND STANDARDS
OFFICE OF WATER PROGRAM OPERATIONS
OFFICE OF DRINKING WATER
OFFICE OF AIR QUALITY PLANNING AND STANDARDS
OFFICE OF MOBILES SOURCE AIR POLLUTION CONTROL
OFFICE OF NOISE ABATEMENT AND CONTROL
OFFICE OF RADIATION PROGRAMS
OFFICE OF PESTICIDE PROGRAMS
OFFICE OF CHEMICAL CONTROL
OFFICE OF TESTING AND EVALUATION
OFFICE OF PROGRAM INTEGRATION AND INFORMATION
OFFICE OF ENVIRONMENTAL PROCESSES AND EFFECTS RESEARCH
OFFICE OF ENVIRONMENTAL ENGINEERING AND TECHNOLOGY
OFFICE OF HEALTH RESEARCH
OFFICE MONITORING AND TECHNICAL SUPPORT
REGION I BOSTON
REGION II NEW YORK
REGION III PHILADELPHIA
REGION IV ATLANTA
REGION V CHICAGO
REGION VI DALLAS
REGION VII KANSAS CITY
REGION VIII DENVER
REGION IX SAN FRANCISCO
REGION X SEATTLE

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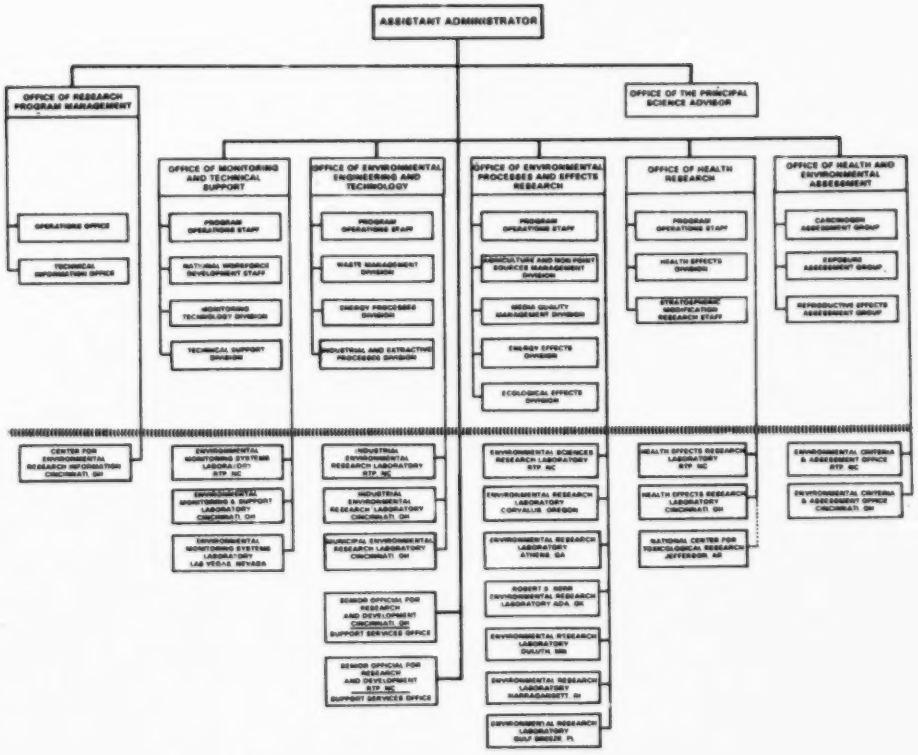
U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT


ASSISTANT ADMINISTRATOR
OFFICE OF RESEARCH PROGRAM MANAGEMENT
OPERATIONS OFFICE
TECHNICAL INFORMATION OFFICE
CENTER FOR ENVIRONMENTAL RESEARCH INFORMATION CINCINNATI OH
OFFICE OF THE PRINCIPAL SCIENCE ADVISOR
OFFICE OF MONITORING AND TECHNICAL SUPPORT
PROGRAM OPERATIONS STAFF
NATIONAL WORKFORCE DEVELOPMENT STAFF
MONITORING TECHNOLOGY DIVISION
TECHNICAL SUPPORT DIVISION
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY RTP NC
ENVIRONMENTAL MONITORING & SUPPORT LABORATORY CINCINNATI OH
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY LAS VEGAS NEVADA
OFFICE OF ENVIRONMENTAL ENGINEERING AND TECHNOLOGY
PROGRAM OPERATIONS STAFF
WASTE MANAGEMENT DIVISION
ENERGY PROCESSES DIVISION
INDUSTRIAL AND EXTRACTIVE PROCESSES DIVISION
INDUSTRIAL ENVIRONMENTAL RESEARCH LABORATORY RTP NC
INDUSTRIAL ENVIRONMENTAL RESEARCH LABORATORY CINCINNATI OH
MUNICIPAL ENVIRONMENTAL RESEARCH LABORATORY CINCINNATI OH
SENIOR OFFICIAL FOR RESEARCH AND DEVELOPMENT CINCINNATI OH SUPPORT SERVICES OFFICE
SENIOR OFFICIAL FOR RESEARCH AND DEVELOPMENT RTP NC SUPPORT SERVICES OFFICE
OFFICE OF ENVIRONMENTAL PROCESSES AND EFFECTS RESEARCH
PROGRAM OPERATIONS STAFF
AGRICULTURE AND NON POINT SOURCES MANAGEMENT DIVISION
MEDIA QUALITY MANAGEMENT DIVISION
ENERGY EFFECTS DIVISION
ECOLOGICAL EFFECTS DIVISION
ENVIRONMENTAL SCIENCES RESEARCH LABORATORY RTP NC
ENVIRONMENTAL RESEARCH LABORATORY CORVALLIS OREGON
ENVIRONMENTAL RESEARCH LABORATORY ATHENS GA
ROBERT S. KERR ENVIRONMENTAL RESEARCH LABORATORY ADA OK
ENVIRONMENTAL RESEARCH LABORATORY DULUTH MN
ENVIRONMENTAL RESEARCH LABORATORY NARRAGANSETT RI
ENVIRONMENTAL RESEARCH LABORATORY GULF BREEZE FL
OFFICE OF HEALTH RESEARCH
PROGRAM OPERATIONS STAFF
HEALTH EFFECTS DIVISION
STRATOSPHERIC MODIFICATION RESEARCH STAFF
HEALTH EFFECTS RESEARCH LABORATORY RTP NC
HEALTH EFFECTS RESEARCH LABORATORY CINCINNATI OH
NATIONAL CENTER FOR TOXICOLOGICAL RESEARCH JEFFERSON AR
OFFICE OF HEALTH AND ENVIRONMENTAL ASSESSMENT
CARCINOGEN ASSESSMENT GROUP
EXPOSURE ASSESSMENT GROUP
REPRODUCTIVE EFFECTS ASSESSMENT GROUP
ENVIRONMENTAL CRITERIA & ASSESSMENT OFFICE RTP NC
ENVIRONMENTAL CRITERIA & ASSESSMENT OFFICE CINCINNATI OH

OFFICE OF RESEARCH AND DEVELOPMENT ORGANIZATION

The Office of Research and Development is responsible for the development, direction, and conduct of a national research, development, and demonstration program in pollution sources, fate, and health and welfare effects; waste management and utilization technology; environmental sciences; and monitoring systems. The Assistant Administrator for Research and Development also serves as principal science advisor to the Administrator and coordinator for the Agency's policies and programs concerning carcinogenesis and related problems.

	Telephone*
ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT	
STEPHEN J. GAGE Headquarters, Washington, DC (RD-672)	(202) 755-2600
Associate Assistant Administrator	
Carl R. Gerber	(202) 755-0122
Executive Assistant	
Darryl Banks	(202) 755-0122
Senior ORD Official, Cincinnati	
David G. Stephan Cincinnati, OH 45268	(513) 684-4402
Support Services Office Director, Robert N. Carr	(513) 684-7966
Public Awareness Officer V. Ernst Minor	(513) 684-7931
Senior ORD Official, Research Triangle Park	
John K. Burchard (MD-60) Research Triangle Park, NC 27711	CML (919) 541-2821 FTS 629-2821
Support Services Office Director, Paul A. Kenline (MD-51)	CML (919) 541-2613 FTS 629-2613
Public Awareness Officer Chris L. West (MD-51)	CML (919) 541-4577 FTS 629-4577
Environmental Criteria and Assessment Office (Air)	
Director, Lester Grant (MD-52) Research Triangle Park, NC 27711	CML (919) 541-2266 FTS 629-2266

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

*Telephone numbers are both commercial (CML) and Federal Telecommunications System (FTS) unless otherwise indicated.

	Telephone*
Environmental Criteria and Assessment Office (Water) Director, Jerry F. Stara Cincinnati, OH 45268	(513) 684-7406
Office of Research Program Management Director, Samuel Rondberg Headquarters, Washington, DC (RD-675)	(202) 755-2606
Operations Office Deputy Director, Alan Neuschatz	(202) 755-2590
Administrative Management Staff Chief, Bernard E. McMahon	(202) 755-8787
Planning Staff Chief, Robert J. Edgar	(202) 755-9722
Program Coordination Staff Chief (Vacant)	(202) 755-0473
Regional Services Staff Chief, Michael Mastracci	(202) 755-0820
Technical Information Office Deputy Director, W. Randall Shobe	(202) 755-0468
Center for Environmental Research Information Acting Director, Calvin O. Lawrence Cincinnati, OH 45268	(513) 684-7391
Office of the Principal Science Advisor Headquarters, Washington, DC (RD-676)	
Principal Physical Science Advisor Herbert Wiser	(202) 755-0477
Principal Engineering Advisor Albert C. Trakowski	(202) 755-0464
Anticipatory Research Program Acting Director, Dennis A. Tirpak	(202) 755-0455
Office of Health and Environmental Assessment Acting Director, Elizabeth L. Anderson Headquarters, Washington, DC (RD-689)	
Carcinogen Assessment Group Executive Director, Elizabeth L. Anderson	
Exposure Assessment Group Director (Vacant)	

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Office of Health and Environmental Assessment (cont'd)

Telephone*

Reproductive Effects Assessment Group
Director (Vacant)

Office of Environmental Engineering and Technology

The Office of Environmental Engineering and Technology is responsible for the assessment and the development of methods for control of the environmental and socio-economic impacts of energy and mineral resource extraction, processing, conversion, and utilization systems and of other industrial operations.

Deputy Assistant Administrator
Stephen R. Reznek — (202) 755-4857
Headquarters, Washington, D.C. (RD-681)

Associate Deputy Assistant Administrator
(Vacant) — (202) 755-4857

Program Operations Staff
Director, Richard M. Hardesty — (202) 426-2507

Energy Processes Division
Director, Frank T. Princiotta — (202) 755-0205

Industrial and Extractive Process Division
Director, Carl J. Schafer — (202) 755-9014

Waste Management Division
Director, William A. Rosenkranz — (202) 426-4567

Industrial Environmental Research Laboratory
Director, John K. Burchard (MD-60) — 541-2821
Deputy Director, Norbert Jaworski — FTS 629-2821
Research Triangle Park, NC 27711

Industrial Environmental Research Laboratory
Director, David G. Stephan — (513) 684-4402
Deputy Director, William A. Cawley — (513) 684-4438
Cincinnati, OH 45268

Oil and Hazardous Materials Spills Branch — CML (201) 321-6600
Edison, NJ 08817 — FTS 340-6600

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

*Telephone numbers are both commercial (CML) and Federal Telecommunications System (FTS) unless otherwise indicated.

	Telephone*
Municipal Environmental Research Laboratory	
Director, Francis T. Mayo	(513) 684-7951
Deputy Director, Louis W. Lefke	(513) 684-7953
Cincinnati, OH 45268	
Lebanon Pilot Plant	FTS 684-2000
Rte. 2, Box 7-A	ask for
Glossar Road	CML (513) 932-4951
Lebanon, OH 45036	

Office of Environmental Processes and Effects Research

The Office of Environmental Processes and Effects Research is responsible for planning, managing, and evaluating a comprehensive research program to develop the scientific and technological methods and data necessary to understand, predict, and manage the entry, movement, fate of pollutants into the environment and the food chain and the effects of pollutants upon nonhuman organisms and ecosystems.

Deputy Assistant Administrator	
(Vacant)	(202) 426-0803
Headquarters, Washington, DC (RD-682)	
Associate Deputy Assistant Administrator	
Courtney Riordan	(202) 426-0803
Program Operations Staff	
Director, Patricia M. Kolojeski	(202) 426-4255
Agriculture and Non-Point Source Management Division	
Director, Darwin R. Wright	(202) 426-2407
Media Quality Management Division	
Director (Vacant)	(202) 426-1532
Energy Effects Division	
Director, Clinton W. Hall	(202) 426-0264
Ecological Effects Division	
Director, David A. Flemer	(202) 426-2260
Environmental Sciences Research Laboratory	
Director, A. Paul Altshuller (MD-59)	CML (919) 541-2191
Deputy Director, Alfred H. Ellison	FTS 629-2191
Research Triangle Park, NC 27711	

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

*Telephone numbers are both commercial (CML) and Federal Telecommunications System (FTS) unless otherwise indicated.

	Telephone*
Environmental Sciences Research Laboratory (cont'd)	
Regional Air Pollution Study Field Office 11640 Administration Drive St. Louis, MO 63141	CML (314) 425-7022 FTS 279-7022
Robert S. Kerr Environmental Research Laboratory Director, William C. Galegar Deputy Director, Marvin L. Wood P.O. Box 1198 Ada, OK 74820	CML (405) 332-8800 FTS 743-2224 FTS 743-2226
Environmental Research Laboratory Director, David D. Duttweiler Deputy Director, William T. Donaldson College Station Road Athens, GA 30605	CML (404) 546-3134 FTS 250-3134 CML (404) 546-3430 FTS 250-3430
Environmental Research Laboratory Director, Thomas A. Murphy Deputy Director (Vacant) 200 SW 35th Street Corvallis, OR 97330	CML (503) 757-4601 FTS 420-4601
Newport Field Station Marine Science Center Newport, OR 97365	FTS 423-4111 ask for CML (503) 867-4031
Ely Field Station 222 West Conan Street Ely, MN 55731	FTS 725-4242 ask for CML (218) 365-5280
Western Fish Toxicology Station 1350 SE Goodnight Avenue Corvallis, OR 97330	CML (503) 757-4765 FTS 420-4735
Environmental Research Laboratory Director (Vacant) Deputy Director, J. David Yount 6201 Congdon Boulevard Duluth, MN 55804	CML (218) 727-6692 FTS 783-9550 FTS 783-9549

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

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	Telephone*
Environmental Research Laboratory (cont'd)	
Newtown Fish Toxicology Station 3411 Church Street Cincinnati, OH 45244	(513) 684-8601
Monticello Field Station Box 500 Monticello, MN 55362	CML only (612) 295-5145
Large Lakes Research Station 9311 Groh Road Grosse Ile, MI 48138	CML (313) 675-5000 FTS 226-7811
Environmental Research Laboratory Director (Vacant) Deputy Director, Frank G. Lowman South Ferry Road Narragansett, RI 02882	CML (401) 789-1071 FTS 838-4843
Environmental Research Laboratory Director (Vacant) Deputy Director, Tudor T. Davies Sabine Island Gulf Breeze, FL 32561	CML (904) 932-5311 FTS 686-9011
Bears Bluff Field Station Box 368 Johns Island, SC 29455	FTS 577-4171 ask for CML (803) 599-0371

Office of Health Research

The Office of Health Research is responsible for the development of health data needed for the establishment of standards and criteria or guidelines for those components of the environment in which specific pollutants or activities may require control.

Deputy Assistant Administrator
Vilma R. Hunt — (202) 426-2382
Headquarters, Washington, DC (RD-683)

Associate Deputy Assistant Administrator
William S. Murray — (202) 755-9210

Program Operations Staff
Director, Roberta A. Cahill — (202) 755-9210

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

*Telephone numbers are both commercial (CML) and Federal Telecommunications System (FTS) unless otherwise indicated.

	Telephone*
Stratospheric Modification Research Staff	
Director, Alphonse F. Forziati	(202) 426-2317
Health Effects Division	
Director (Vacant)	(202) 426-2275
Health Effects Research Laboratory	
Director, F. Gordon Hueter (MD-51)	CML (919) 541-2281
Deputy Director, Robert E. Lee, Jr.	FTS 629-2281
Research Triangle Park, NC 27711	
Wenatchee Research Station	CML (504) 663-0031
P.O. Box 73	FTS 446-0234
Wenatchee, WA 98801	
Health Effects Research Laboratory	
Director, R. John Garner	(513) 684-7401
Deputy Director, James Lucas, M.D.	(513) 684-7401
Cincinnati, OH 45268	
Recreational Water Quality Criteria Group	
South Ferry Road	CML (401) 789-1071
Narragansett, RI 02282	FTS 838-4843

Office of Monitoring and Technical Support

The Office of Monitoring and Technical Support is responsible for the development and demonstration of monitoring systems; quality control of pollutant measurement and monitoring techniques (quality assurance); and technical support services.

Deputy Assistant Administrator	
H. Matthew Bills (Acting)	(202) 426-2202
Headquarters, Washington, DC (RD-680)	
Associate Deputy Assistant Administrator	
H. Matthew Bills	(202) 426-4453
Program Operations Staff	
Director, Ross R. Robeson	(202) 755-6403
National Workforce Development Staff	
Director, J. Donald Cook	(202) 755-2937
Monitoring Technology Division	
Director, Charles Brunot	(202) 426-2026

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

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	Telephone*
Technical Support Division Director, William J. Lacy	(202) 426-2382
Environmental Monitoring Systems Laboratory Director, Thomas R. Hauser (MD-75) Deputy Director, Franz J. Burmann Research Triangle Park, NC 27711	CML (919) 541-2106 FTS 629-2106
Environmental Monitoring & Support Laboratory Director, Dwight G. Ballinger Deputy Director, Robert L. Booth Cincinnati, OH 45268	(513) 684-7301
Environmental Monitoring Systems Laboratory Director, George B. Morgan Deputy Director, Richard S. Stanley P.O. Box 15027 Las Vegas, NV 89114	CML (702) 736-2969 FTS 595-2969
Vint Hill Station P.O. Box 1587, Building 166 Warrenton, VA 22186	CML (703) 347-6224 FTS 557-3110

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

*Telephone numbers are both commercial (CML) and Federal Telecommunications System (FTS) unless otherwise indicated.

OFFICE/LABORATORY ABBREVIATIONS

Code	
ECAO/Cin	Environmental Criteria and Assessment Office/ Cincinnati, OH 45268 (513) 684-7406
ECAO/RTP	Environmental Criteria and Assessment Office/ Research Triangle Park, NC 27711 CML (919) 541-2266 FTS 629-2266
EMSL/Cin	Environmental Monitoring and Support Laboratory/Cincinnati, OH 45268 (513) 684-7301
EMSL/LV	Environmental Monitoring Systems Laboratory/ Las Vegas, NV P.O. Box 15027 Las Vegas, NV 89114 CML (702) 736-2969 FTS 595-2969
EMSL/RTP	Environmental Monitoring Systems Laboratory/ Research Triangle Park, NC 27711 CML (919) 541-2106 FTS 629-2106
ERL/Athens	Environmental Research Laboratory/Athens, GA College Station Road Athens, GA 30605 CML (404) 546-3134 FTS 250-3134
ERL/Cor	Environmental Research Laboratory/Corvallis, OR 200 SW 35th Street Corvallis, Or 97330 CML (503) 757-4601 FTS 420-4601
ERL/Dul	Environmental Research Laboratory/Duluth, MN 6201 Congdon Boulevard Duluth, MN 55804 CML (218) 727-6692 FTS 783-9550
ERL/GB	Environmental Research Laboratory/Gulf Breeze, FL Sabine Island Gulf Breeze, FL 32561 CML (904) 932-5311 FTS 686-9011

Code	
ERL/Narr	Environmental Research Laboratory/Narragansett, RI South Ferry Road Narragansett, RI 02882 CML (401) 789-1071 FTS 838-4843
ESRL/RTP	Environmental Sciences Research Laboratory/ Research Triangle Park, NC 27711 CML (919) 541-2191 FTS 629-2191
HERL/Cin	Health Effects Research Laboratory/ Cincinnati, OH 45268 (513) 684-7401
HERL/RTP	Health Effects Research Laboratory/ Research Triangle Park, NC 27711 CML (919) 541-2281 FTS 629-2281
IERL/Cin	Industrial Environmental Research Laboratory/ Cincinnati, OH 45268 (513) 684-4402
IERL/RTP	Industrial Environmental Research Laboratory/ Research Triangle Park, NC 27711 CML (919) 541-2821 FTS 629-2821
MERL/Cin	Municipal Environmental Research Laboratory/ Cincinnati, OH 45268 (513) 684-7951
OEET/HQ	Office of Environmental Engineering and Technology (RD-681) Washington, DC 20460 (202) 755-4857
OEPER/HQ	Office of Environmental Processes and Effects Research (RD-683) Washington, DC 20460 (202) 426-0803
OHEA/HQ	Office of Health and Environmental Assessment (RD-689) Washington, DC 20460 (202) 755-3768
OHR/HQ	Office of Health Research (RD-682) Washington, DC 20460 (202) 426-2382

Code

OMTS/HQ Office of Monitoring and Technical Support
(RD-680)
Washington, DC 20460
(202) 426-2382

OPSA/HQ Office of the Principal Advisor
(RD-676)
Washington, DC 20460
(202) 755-0477

RSKERL/Ada Robert S. Kerr Environmental Research Laboratory/
Ada, OK
P.O. Box 1198
(S. Craddock & Kerr Lab. Road)
Ada, OK 74820
CML (405) 332-8800
FTS 743-2224

EPA Regional Contacts

Because of the importance of planning and coordinating research and development activities with the requirements of EPA's regional needs, the Office of Research and Development has created the Regional Services Staff. This staff is responsible for planning, coordinating, and reviewing a comprehensive program to provide intercommunication and assistance on all matters of mutual interest and/or responsibility of the Agency's Regional Offices and the Office of Research and Development.

Telephone*

Regional Services Staff

Director, Michael L. Mastracci — (202) 755-0820
Staff Asst., Frances M. Duttkin
Regional Services Staff
Headquarters, Washington, DC (RD-675)

Regional Liaison Officers

Regions I, II, and V

Ernest G. Karvelis — (513) 684-7285
Joseph F. Roesler
Regional Services Staff
Environmental Protection Agency
26 W. St. Clair Street
Cincinnati, OH 45268

Regions VI, VIII, IX, and X

Richard E. Jaquish — CML (702) 736-2969
Phillips A. Arberg — FTS 595-2969
Regional Services Staff
Environmental Protection Agency
P.O. Box 15027
Las Vegas, NV 89114

Regions III, IV, VII

Rudolph P. Boksleitner — CML (919) 541-2611
Gordon C. Ortman — FTS 629-2611
Regional Services Staff (MD-5)
Environmental Protection Agency
Research Triangle Park, NC 27711

The mailing address for the Office of Research and Development is: Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Headquarters mail should also include the Mail Code.

*Telephone numbers are both commercial (CML) and Federal Telecommunications System (FTS) unless otherwise indicated.

	Telephone*

Region I

Environmental Protection Agency
Room 2203
John F. Kennedy Federal Building
Boston, Massachusetts 02203

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Regional Administrator William R. Adams, Jr.	(617) 223-7210
Deputy Regional Administrator Rebecca W. Hanmer	(617) 223-7210
Public Awareness Director Paul G. Keough	(617) 223-4704
R&D Contact Richard Keppler	(617) 223-3477

Region II

Environmental Protection Agency
Room 1009
26 Federal Plaza
New York, New York 10007

New Jersey
New York
Puerto Rico
Virgin Islands

Regional Administrator (Vacant)	(212) 264-2525
Deputy Regional Administrator Richard T. Dewling	(212) 264-0396
Public Awareness Director James Marshall	(212) 264-2515
R&D Contact Robert W. Mason	(212) 340-6782

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	Telephone*
Region III	
Environmental Protection Agency Curtis Building 6th & Walnut Streets Philadelphia, Pennsylvania 19106	Delaware District of Columbia Maryland Pennsylvania West Virginia Virginia
Regional Administrator Jack J. Schramm	(215) 597-9814
Deputy Regional Administrator Alvin R. Morris	(215) 597-9812
Office of Congressional Affairs Larry Teller	(215) 597-9816
R&D Contact Albert Montague	(215) 597-9856
Region IV	
Environmental Protection Agency 345 Courtland Street, N.E. Atlanta, Georgia 30308	Alabama Florida Georgia Kentucky Mississippi North Carolina South Carolina Tennessee
Regional Administrator John C. White	CML (404) 881-4727 FTS 257-4727
Deputy Regional Administrator John A. Little	CML (404) 881-4727 FTS 257-4727
Public Awareness Director Charles D. Pou	CML (404) 881-3004 FTS 257-3004
R&D Contact Joseph R. Frazmathis	CML (404) 881-3476 FTS 257-3476

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	Telephone*
Region V	
Environmental Protection Agency 230 S. Dearborn Chicago, Illinois 60604	Illinois Indiana Michigan Minnesota Ohio Wisconsin
Regional Administrator John McGuire	(312) 353-2000
Deputy Regional Administrator Valdas V. Adamkus	(312) 353-2000
Public Awareness Director Frank M. Corrado	(312) 353-2072
R&D Contact Clifford Risley, Jr.	(312) 353-2314
Region VI	
Environmental Protection Agency 1201 Elm Street First International Building Dallas, Texas 75270	Arkansas Louisiana New Mexico Oklahoma Texas
Regional Administrator Adlene Harrison	(214) 729-2600
Deputy Regional Administrator Earl N. Kari	(214) 729-2600
Public Awareness Director Ed Grisham	(214) 729-2600
R&D Contact Mildred Smith	(214) 729-2697

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	Telephone*
Region VII	
Environmental Protection Agency 1735 Baltimore Avenue Kansas City, Missouri 64108	Iowa Kansas Missouri Nebraska
Regional Administrator Kathleen Camin	CML (816) 374-5493 FTS 758-5493
Deputy Regional Administrator David Alexander	CML (816) 374-5495 FTS 758-5495
Office of External Affairs Donald D. Christenson	CML (816) 374-3582 FTS 758-3582
R&D Contact Charles Hajinian	CML (816) 374-2921 FTS 758-2921
Region VIII	
Environmental Protection Agency Suite 900 1860 Lincoln Street Denver, Colorado 80203	Colorado Montana North Dakota South Dakota Utah Wyoming
Regional Administrator Alan Merson	CML (303) 837-3895 FTS 327-3895
Deputy Regional Administrator Roger L. Williams	CML (303) 837-3895 FTS 327-3895
Public Awareness Director Richard Lathrop	CML (303) 837-4904 FTS 327-4904
R&D Contact Dennis Nelson	CML (303) 837-2226 FTS 327-2226

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	Telephone*
Region IX	
Environmental Protection Agency 215 Fremont Street San Francisco, California 94105	Arizona California Hawaii Nevada
Regional Administrator Paul DeFalco, Jr.	(415) 556-2320
Deputy Regional Administrator Sheila Prendiville	(415) 556-2320
Office of External Relations David L. Calkins	(415) 556-6266
R&D Contact Carl Kohnert	(415) 556-6266
Region X	
Environmental Protection Agency 1200 6th Avenue Seattle, Washington 98101	Alaska Idaho Washington Oregon
Regional Administrator Donald P. DuBois	CML (206) 442-1220 FTS 399-1220
Deputy Regional Administrator L. Edwin Coate	CML (206) 442-1220 FTS 399-1220
Public Awareness Director Donald Bliss	CML (206) 442-1203 FTS 399-1203
R&D Contact John Osborn	CML (206) 442-1296 FTS 399-1296

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Catalog of Federal Domestic Assistance/ORD Program Guide Cross-Reference

The *Catalog of Federal Domestic Assistance* (CFDA) is another publication which provides information for Federal research grants, cooperative agreement, or contract applicants. The CFDA lists several research programs that are administered by the Office of Research and Development. Supplemental information concerning the extramural activities described in this guide may be found in the CFDA. The correlation between ORD's research activities and the programs listed in the CFDA is shown in the following index.

CFDA Number	CFDA Title	Program Guide Title	Page
66,500	Environmental Protection—Consolidated Research Grants	Energy Interdisciplinary	18 29
66,501	Air Pollution Control Research Grants	Air	5
66,502	Pesticides Control Research Grants	Pesticides	32
66,504	Solid Waste Disposal Research Grants	Solid Waste	37
66,505	Water Pollution Control Research, Development, and Demonstration Grants	Water Quality	45
66,506	Safe Drinking Water Research and Demonstration Grants	Drinking Water	15
66,507	Toxic Substances Research Grants	Toxic Substances	38

ORD's Extramural Program

While some of the research funded for fiscal year 1980 will be done in-house by ORD's staff, much of the research will be accomplished by grant/cooperative agreement or contract. To explain how each of these is used, a brief discussion follows.

Contracts

A contract is used (1) whenever the principal purpose of the instrument is the acquisition, by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; or (2) whenever an executive agency determines in a specific instance that the use of a type of procurement contract is appropriate.

All planned contracting is carried out competitively with notices of the availablity of Request for Proposal (RFP) documents publicly advertised. Unsolicited contract proposals should *not* be submitted for such reports. The review/selection procedures followed may vary slightly from project to project, but all pertinent information regarding both the project objectives and criteria for evaluation of proposals will be included in each RFP package. The Laboratory Director should not be contacted for information on contracts that have been advertised since such communication may conflict with Federal Procurement Regulations and could serve to disqualify a prospective contractor from further consideration.

Solicited Contract Proposals

Requests for Proposals (RFP's) for all planned contracts will be advertised in the Commerce Business Daily issued by the U.S. Department of Commerce. A subscription to this publication may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. These advertisements will provide instructions for obtaining RFP packages from EPA's Contracts Management Division. Each RFP package will include detailed information describing the form and context of proposals to be submitted as well as the required time and place of submission.

EPA's Contracts Management Division publishes "Selling to EPA" to assist the business community in its efforts to find new markets in the Environmental Protection Agency. This publication includes the names and addresses of contracting offices in EPA and the Office of Research and Development laboratories, the types of products and services procured, general information about the Agency, and hints to aid businessmen in selling to EPA.

Unsolicited Contract Proposals

While most of ORD's contract research and demonstration is conducted through the use of RFP's to solicit proposals, contracts can also be awarded on the basis of unsolicited proposals which meet the

sole-source requirements of the Federal Procurement Regulations. Unsolicited contract proposals should be addressed to the Grants Administration Division (PM-216), Environmental Protection Agency, Washington, DC 20460. While no specific format is required, such proposals should generally contain:

1. Name, address and telephone number of the organization or individual submitting the proposal.
2. Date of preparation or submission.
3. Type of organization (profit, nonprofit, educational, individual, other).
4. Concise title.
5. Project objective.
6. Need, utility and significance of project.
7. Scope of work, i.e., an outline and discussion of the purpose of proposed effort of activity, the method of attacking the problem, and nature and extent of anticipated results.
8. Experimental data developed by feasibility studies previously completed.
9. Estimated duration of the project, proposed starting and completion dates.
10. Scientific or technical references.
11. Names of key personnel to be involved, brief biographical information, including principal publications and relevant experience.
12. Equipment, facilities and personnel requirements.
13. Proposed budget, including separate cost estimates for salaries and wages, equipment, expendable supplies, services, travel, subcontracts, other direct costs and overhead.

EPA's Appropriation Act specifically provides that cost sharing must be included in contracts resulting from proposals for projects not specifically solicited. The extent of the cost sharing by the recipient will be decided after the proposal has been reviewed and determined to be of mutual interest to the grantee or contractor and the government.

The material submitted should contain both a technical and a business proposal. The technical proposal should clearly define the unique concept involved (as required for sole-source procurements) and include a plan for turning the concept into reality. It is suggested that the technical proposal identify any proprietary aspects of the proposed ideas or process. The business proposal should include a detailed cost proposal, information concerning past Government contracts, and any special terms and conditions desired.

ORD Assistance Program

Grant Agreements

A grant is to be used when (1) the principal purpose of the relationship is **the transfer** of money, property, services or anything of value to the State or local government or other recipient in order to accomplish a public purpose of support or stimulation authorized by Federal statute, **rather than** acquisition, by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; and (2) **no substantial involvement** is anticipated between the executive agency, acting for the Federal Government, and the State or local government or other recipient during performance of the contemplated activity.

Grant allocations will be made by a new office to be established in ORD Headquarters. The primary area of grant concern is in anticipatory or exploratory research. Topics of special interest will be announced in flyers.

Cooperative Agreements

A cooperative agreement is used in lieu of a grant when (1) the principal purpose of the relationship is the transfer of money, property, services, or anything of value to the State or local government or other recipient to accomplish a public purpose of support or stimulation authorized by Federal statute, rather than acquisition, by purchase, lease, or barter, of property or services for the direct benefit or use of the Federal Government; and (2) **substantial involvement is anticipated between the executive agency,** acting for the Federal Government, and the State or local government or other recipient during performance of the contemplated activity.

Prior to applying for a cooperative agreement, contact with the cognizant Laboratory Director is encouraged. This will allow for the development of the appropriate relationship between the recipient of the agreement and ORD.

Until the following new procedures can be implemented, applications for both grants and cooperative agreements should be submitted according to the instructions on the inside front cover.

Notice of Change in Procedures for Grants and Cooperative Agreements

Effective October 1, 1979, The Office of Research and Development is implementing the recommendations of an internal Grant Procedures Review Group. The Group reviewed the recommendations of previous ORD operational studies and recommended a number of comprehensive changes in ORD's grant research proposal solicitation, review, management and award processes. These changes will be incorporated in ORD's administrative regulations, 40 CFR Part 40.

Briefly Summarized, these changes are as follows:

- *Central point of contact.* ORD will establish a new office at HQ EPA, Washington. This office will serve as a central point of contact for interested researchers who desire additional information on funds available, programs or projects of EPA interest, or application,

procedures. It will also be tasked with managing ORD's grant program and a new peer review process for research proposals.

- *Expanded solicitation.* ORD is broadening its research base by encouraging a greater number of applications for research funding assistance. Special encouragement is extended to scientists who have not previously received ORD extramural funding assistance, and qualified minority and female researchers. ORD is developing a program solicitation system utilizing "flyers," the *Federal Register*," the *Commerce Business Daily* and other media of interest to the scientific community.

- *Proposal/Application Review.* ORD is changing its current system of ad hoc or mail review of proposals to a centralized peer review process similar to that used by the National Institutes of Health. Reviews will be scheduled on a quarterly or as needed basis. The review process may include site visits or ad hoc review in special cases. Also subject to this peer review will be a sampling of requests for a continuation or funding increase of ongoing projects.

- *Grant* vs. *Cooperative Agreement.* The decision to fund or reject will be based on peer review ranking, ORD research needs and priorities, and available resources. Acceptable applications which are **neither** funded or rejected may be held for possible funding for up to six months.

  Decision Official:
  Grants—ORD Headquarters Grants Office
  Cooperative Agreements—Responsible Laboratory Director

It is anticipated that most cooperative agreements will be developed in consultation with ORD laboratory scientists or through solicitations. Instructions on the use of the new award procedures, and instruments are being developed. In the meantime, researchers should apply under the procedures described below:

- *Reporting Requirements.* Grant awards will require an annual and final report upon completion of the project. Cooperative agreements will require a final report and other reporting requirements as may be determined by the ORD laboratory decision official at the time of award. Selected grant and cooperative agreement awardees may be requested to present project results at periodic seminars conducted by ORD.

Grant or Cooperative Agreement Applications

Pre-application Activity

Although grant or cooperative agreement applications may be submitted at any time and on any subject, applicants should take the following actions prior to submission of a formal grant application in order to save time and effort both for the applicant and EPA.

1. Review ORD's current research program, as described in Part I, to determine if funds are available in the specific area of interest; and

2. Contact the appropriate research and development personnel cited to ascertain if an assistance project is planned **prior** to the submission of an official application.

Grants:
Dr. Richard E. Marland
ORD Grants Program (RD-675)
Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460
Phone: 202/755-2532

Cooperative Agreements:
Contact cognizant Laboratory Director as cited within each Decision Unit.

3. Submission of a preapplication is also strongly encouraged. The preapplication should be sent directly to the Grants Administration Division (PM-216), U.S. Environmental Protection Agency, Washington,D.C. 20460, for initial screening and routing to the appropriate ORD program personnel. A preapplication should normally consist of a three- or four-page narrative outlining the project concept and containing the following information:

   1. **Objective**—a clear statement of the specific objective is necessary. If the objective is designed to fulfill a specific project (as identified in Step 1 above), the project should be identified. If the objective cannot be associated with any specific project, some statement of the presumed value to EPA of attaining the research objective should be made.

   2. **Project Plan**—a brief description of the research/development/demonstration concept and the plan for execution of the proposed project, including a projected time-schedule for accomplishments of intermediate outputs or key occurrences indicating progress (milestones) and the final objective.

   3. **Budget**—a preliminary estimate of total cost which will be incurred in order to complete the project. Also, the share of the costs which will be provided by the applicant should be indicated.

   4. **Staff and Facilities**—a brief listing of key project staff and capabilities and a brief description of any special facilities or other factors which would contribute to the success of the project. A single person who

will have the responsibility for planning, coordinating, and supervising the project should be identified along with the fraction of his time to be devoted to the project.

Following review and evaluation of the preapplication, the prospective applicant will be advised whether (a) an application should be submitted for formal review, (b) submission of a modified preapplication is suggested, (c) possible submission of the preapplication to another Agency, Department, or source of funds is suggested, or (d) further pursuit of the particular topic is discouraged.

Formal Applications

All formal grant and cooperative agreement applications are to be submitted to the Grants Administration Division, Environmental Protection Agency, Washington, D.C. 20460. After formal "logging in" and acknowledgement, those applications falling within the Office of Research and Development's purview are referred to the appropriate ORD program office for program relevance review. This review quickly screens out those applications for which EPA has no authority. For those proposals in which ORD has an interest, scientific/technical merit reviews are then conducted. Comments may also be obtained from the Regional Office in the Region where the applicant is located and where the project would be conducted to determine the relationship of the proposed project to Regional programs and policies.

PROGRAM GUIDE FY-81 MAILING LIST

If you wish your name added to the FY-81 Program Guide mailing list, please complete this form and mail it to the following address:

PROGRAM GUIDE FY-81
Technical Information Office (RD-674)
Office of Research and Development
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

_____

Individual Contact and Title

_____

Name of Organization

_____

Street Address

_____

City State Zip

You **must** return this form to receive next year's Program Guide.

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